

H.A

Notice of Allowability

Application No.

10/612,837

Examiner

Alonzo Chambliss

Applicant(s)

MOXHAM ET AL.

Art Unit

2814

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to election requirement filed on 12/16/04.
2. ☒ The allowed claim(s) is/are 1-39.
3. ☒ The drawings filed on 03 July 2003 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying Indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 7/3/03
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____.
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

DETAILED ACTION

1. The previous restriction requirement filed on 12/9/04 has been withdrawn.

Therefore, claims 1-39 are pending in the instant application

Allowable Subject Matter

2. The following is a statement of reasons for the indication of allowance subject matter: the prior art of record does not teach or suggest the combination of interposer substrate having a conductive layer over the first surface. Forming pads over the conductive layer by plating a conductive material over the conductive layer while using the conductive layer as an electrical connection to a power source. After the plating, patterning the conductive layer into electrical traces in claim 1.

An interposer substrate with an conductive layer extending over the surface. Forming contact pads over the conductive layer within the peripheral region by plating a conductive material over the conductive layer while using the conductive layer as an electrical connection to a power source and without utilizing conductive busses, other than the conductive layer extending over any portion of the central region of the substrate. After plating, forming an opening within the central region entirely through the substrate in claim 11.

An interposer substrate with a first conductive layer over the first surface. Forming a second conductive layer over an in physical contact with at least portions of the first conductive layer. Forming a patterned mask covering portions of the second conductive layer while leaving other portions exposed through openings in the mask.

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Plating a third conductive layer over the exposed portions of the second conductive layer while using the first conductive layer as an electrical connection between the exposed portions and a power source. After the plating, patterning the first conductive layer into electrical traces in claim 18.

An interposer substrate having a first conductive layer over the first surface. Forming a first patterned mask over the first conductive layer, wherein the first patterned mask having openings extending there through to the first conductive layer to define a circuit pattern. Forming a second conductive layer over and in physical contact with portions of the first conductive layer exposed through the openings, wherein the second conductive layer thereby being formed in the circuit pattern. Forming a second mask patterned mask to cover portions of the second conductive layer while leaving other portions exposed through openings in the second patterned mask, wherein the exposed portions of the second conductive layer being contact pad locations. Plating a third conductive layer over the contact pad locations while using the first conductive layer as an electrical connection to a power source. Removing the first and second patterned masks and patterning the first conductive layer into traces defined by the circuit pattern of the second conductive layer in claims 23, 30, 31, and 33.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


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Any inquiry concerning the communication or earlier communications from the examiner should be directed to Alonzo Chambliss whose telephone number is (571) 272-1927.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the group receptionist whose telephone number is (703) 308-7956.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system Status information for published applications may be obtained from either Private PMR or Public PMR. Status information for unpublished applications is available through Private PMR only. For more information about the PMR system see <http://pair-dkect.uspto.gov>. Should you have questions on access to the Private PMR system contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or EBC_Support@uspto.gov.

AC/March 7, 2005


Alonzo Chambliss
Primary Patent Examiner
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